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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/935,891	08/23/2001	Nobuo Sasaki	SCEI 3.0-081	1355

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EXAMINER	
RAHMJOO, MANUCHER	

ART UNIT	PAPER NUMBER
2628	

DATE MAILED: 09/20/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.		Applicant(s)	
	09/935,891		SASAKI ET AL.	
	Examiner		Art Unit	
	Mike Rahmjoo		2628	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 August 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-7,9-13,15-20,33,36,39-41 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3-7,9-13,15-20,33,36 and 39-41 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 1,3-7,9-13,15-20,33,36,39-41 rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

As per claims 1,3-7,9-13,15-20,33,36,39-41 applicant claims steps of extracting, rendering, anti- aliasing and overwriting an image. Said steps are merely descriptive material without reaching a final result as being useful, concrete and tangible.

Claims 1,3-7,9-13,15-20,33,36,39-41 are also rejected under 35 U.S.C. 112, first paragraph. Specifically, since the claimed invention is not supported by either a specific and substantial asserted utility or a well established utility for the reasons set forth above, one skilled in the art clearly would not know how to use the claimed invention.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains.

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Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 3- 7, 9-13,15-20, 33, 36, and 39- 41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Naoi et al, US Patent 6,683,617, hereinafter, Naoi in view of Ruehle et al (US Patent 5940080), hereinafter, Ruehle.

As per claims 1, 7, 13, 19- 20, 33, and 36 Naoi teaches determining that a given line part of an object depicted in a three dimensional image is a visually important line part and for extracting only data representing the visually important line part, the visually important line part being a contour line of the depicted object or a contour candidate line of the depicted object, or visually important portion from data representing the three dimensional image see for example block 32 (subline segmenting unit 32) of fig 1 and column 6 lines 4- 9 and lines 24- 30; and an image rendering means for rendering the three dimensional image see for example unit 4 of fig 1 and figure 3 for a candidate of the depicted object ; and antialiasing means for antialiasing only the extracted data to form an antialiased image portion associated with the visually important line part see for example the abstract and column 11 lines 40- 50; and inherently teaches a computer readable storage medium (memory and HD) for storing a computer program for operating an apparatus to perform an image rendering method and distribution means (FD or CD) for distributing the computer program stored on the computer readable storage medium see for example the image processing apparatus of claim 1.

However, Naoi does not teach extracting means and overwriting means for overwriting only the antialiased image portion onto a corresponding portion of the

rendered image.

Ruehle teaches extracting means see for example column 11 lines 20- 23 and claim 3 and overwriting means for overwriting only the antialiased image portion onto a corresponding portion of the rendered image see for example figure 7 and column 4 lines 30- 45 for overwriting means for overwriting only the antialiased image portion onto a corresponding portion of the rendered image corresponding to placing the whole antialiased text on the image.

It would have been made obvious to one of ordinary skilled in the art at the time the invention was made to incorporate the teachings of Ruehle into Naoi to extract and overwrite an object image or part therefrom from input images so as to perform further processing on the extracted object image or part therefrom and therefore enhance the performance, speed and memory requirements for the device see for example column 9 lines 30- 65.

As per claims 3,9, and 15 Naoi teaches said image rendering means renders the three-dimensional image using polygon data that represents the three-dimensional image see for example unit 4 of figure 1, and said extracting means extracts only the data representing the visually important line part by extracting corresponding data from the polygon data being selected from the group consisting of line data, curve data and line strip data see for example block 32 of figure 1.

As per claims 4,10, and 16 Naoi teaches the visually important line part passes through a plurality of pixels (see for example figures 2- 6 through the passage of sublines 1- 4 through the subpixels), and said antialiasing means generates pixel values

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for each of the plurality of pixels as a function of an occupancy value of that pixel (see for example column 6 lines 46- 51 which shows pixel values as a function of subpixels), the occupancy value of a respective pixel being based on a ratio of an area of an occupied portion of the pixel to an area of the pixel (see for example figures 6a- c with each having a certain ratio with associated percentage of occupancy), the area of the occupied portion of the pixel (see for example column 7 lines 18- 31) being based on an area occupied by a portion of the visually important line part that passes through the pixel when the visually important line part is a straight line or being based on an area occupied by an ideal straight line segment which approximates the portion of the visually important line part when the visually important line part is curved.

As per claims 5,11, and 17 Naoi teaches the portion of the visually important line part or the ideal straight-line segment forms an angle with an X-axis, and said anti-aliasing means anti- aliases a range of pixels along the X-axis when the angle is equal to or larger than a predetermined value; and anti- aliases a range of pixels, along a Y axis that is orthogonal to the X-axis when the angle is smaller than the predetermined value see for example figures 2- 6 and also polygon 2 regions A and B of figure 3 which has representations of X and Y coordinates through each subpixel further making corresponding angles with said axis.

As per claims 6,12, and 18 Naoi teaches each of the plurality of pixels is divided into a matrix of sub-pixels, and said anti- aliasing means determines the area of the occupied portion of the pixel in units of sub-pixel- areas see for example figures 2- 6.

Response to Arguments

Applicant's arguments with respect to claims 1,3-7,9-13,15-20,33,36,39-41 have been considered but are moot in view of the new ground(s) of rejection.

As per applicant's arguments presented 5/2/06, applicant recites "Naoi's sorting/ rendering operation would needlessly create sub- pixel masks for both the pixels that are to be anti- aliased and the pixels that are not anti- aliased" and furthermore "Naoi's sorting/ rendering operation requires four circuit parallel processing because of the increased apparatus scale and increased processing time".

Examiner respectfully disagrees.

Examiner points out the fact that a mask is created does not nullify Naoi as a primary prior art for rejection purposes. The main functionality as apparent from the title, abstract and the portions pointed out and recited from Naoi for rejection are geared towards anti- aliasing the three dimensional image. Naoi's anti- aliased pixels correspond to the rendered image including a portion in which anti- aliasing occurs. Therefore the portion in which there is no anti- aliasing would establish Naoi's pixels which are not anti- aliased.

In response to applicant's remarks dated 7/3/06 a new secondary prior art has been used for rejection and applicant's arguments are moot in view of the new grounds of rejection.

Inquiry


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mike Rahmjoo whose telephone number is 571-272-7789. The examiner can normally be reached on 8 AM- 5 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kee Tung can be reached on 571-272-7794. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Mike Rahmjoo

September 11, 2006



KEE M. TUNG
SUPERVISORY PATENT EXAMINER